AMR100 Property Pass Reader Installation Manual (6015-900)

Installation Requirements

The following instructions will explain the installation and operation procedure for the AMR100 Property Pass Reader. The instructions include these sections:

Installation Instructions
- **Mounting Preparation**
- **Cabling Preparation**
- **Mounting**
- **O-Ring**
- **Switch Settings**
- **Jumper Settings**
- **Power Supply**
- **Cover Installation**

Parts List (Included)	Quantity
1) AMR100 Property Pass Reader	1
2) O-ring - 12"diameter x .25" thick	1
3) #6-32x.625 Flathead Screw	1
4) Installation Manual	1
5) Front Cover Label	1
6) Strain Relief Nut	2

Parts List (NOT Included)	
1) External 12V power supply	1
2) #6 Mounting Screws	A/R
3) Cable (See requirements below)	A/R

Cabling Requirements

Shielded

- **Power & Ground - 18AWG- 22AWG**
- **All other signals - 24 AWG minimum**
- **Strain Relief Nut cable range: .19 to .390**

AMR100 Property Pass Reader

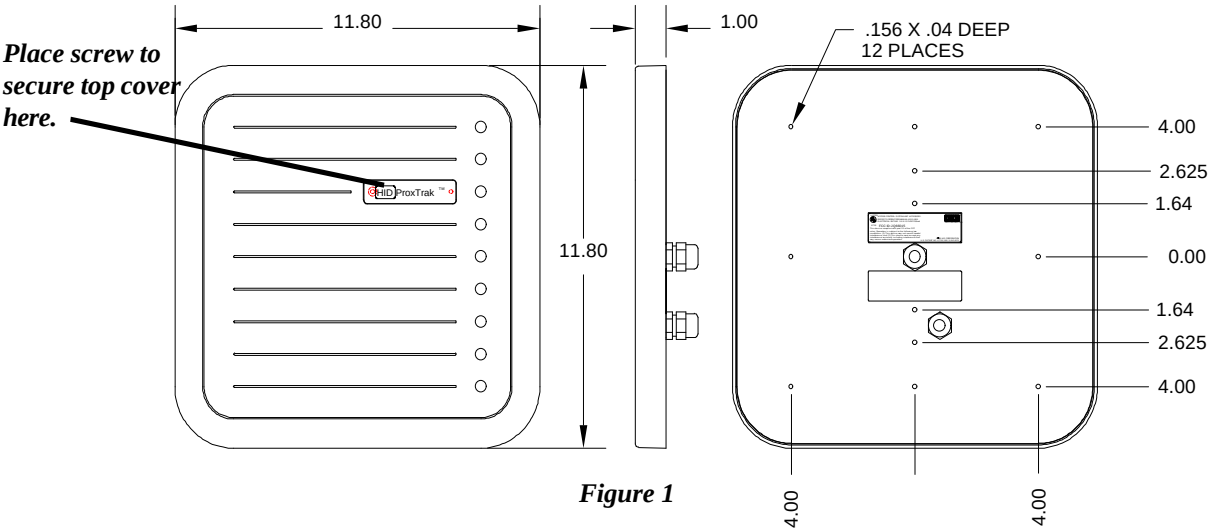


Figure 1

Installation Instructions

Mounting Preparation

1. Determine an appropriate mounting position for the AMR100 Reader.
2. Install an electrical box or drill mounting holes for #6 fasteners. Starter holes for mounting are indicated on Figure 2.
3. The Reader should be mounted at least 6" away from any metallic surface 12"x12" or larger. Incidental metal such as aluminum studs and conduit can be compensated.

Important Product Specifications

Environmental Characteristics	
Operating Temperature Range	-0°C to 70°C (32°F to 150°F)
Storage Temperature Range	-40°C to 85°C (-40°F to 185°F)
Power Requirements	
Operating Voltage Range	12.0VDC ± 1.2VDC
Peak Current 12VDC	1.5A
Average Current	1.0A
Excitation Frequency	125KHz ± 1 KHz

Cable Preparation

1. Route the cable from the AMR100 Reader and/or power supply to the Host.
2. Prepare the cable by cutting the jacket back 2" and strip the wires 1/4". Tinning the wires is not required.
3. Install the cable strain relief nut #1 on the rear of the AMR100 Reader as indicated in Figure 2 . (Strain relief nut #2 is for use with the LCD display unit that is purchased separately. If no LCD unit is being used and a water tight seal is necessary, place a cable segment into the strain relief nut #2 and tighten it)
4. Connect the Reader to the Host according to the terminal description in Figure 4. Do not leave extra loops of wire inside the Reader housing.
5. Tighten the strain relief nut to secure the cable.
6. Connect the drain line of the shield to **TB5-2**. (See Figure 3) If it is bare, sleeve it to avoid short circuits to the other wires.
7. The opposite end of the drain line should be connected to the negative terminal and the frame connections of the power supply.
8. Connect the power supply ground to **TB5-3**. (See Figure 3)

Figure 2

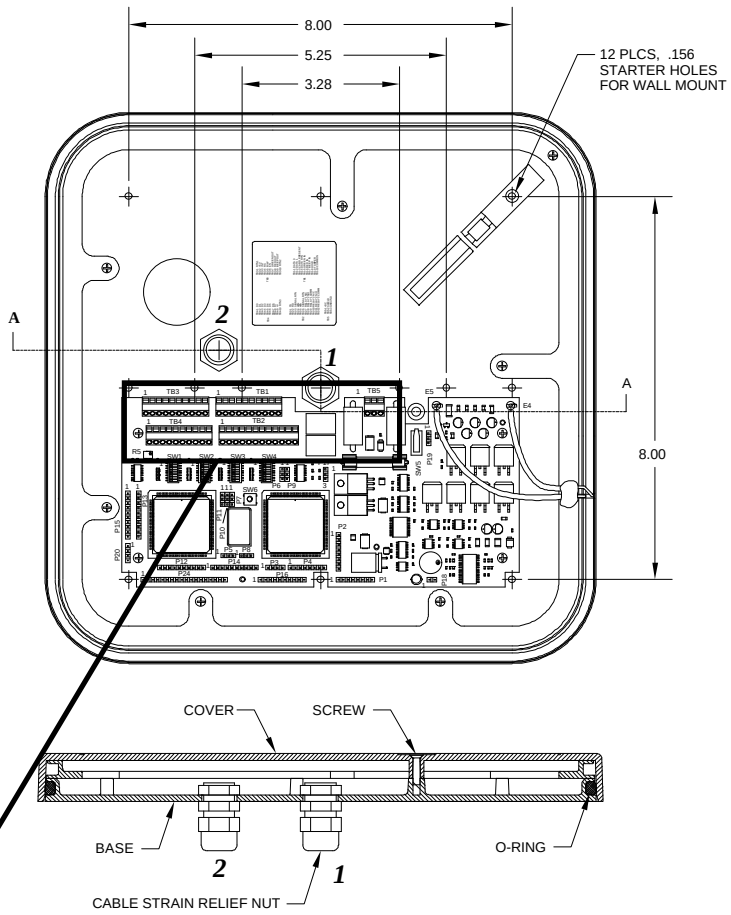


Figure 3

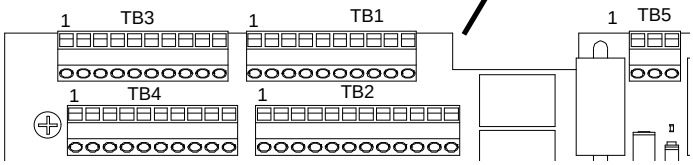
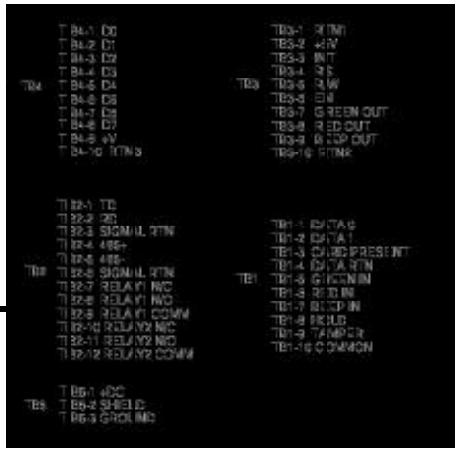


Figure 4



This label is located on the inside base of the AMR100 Reader. It shows all the terminal connections for interfacing the AMR100 Property Pass Reader with the Host. TB3 and TB4 are for use with the LCD add-on unit.

Mounting

1. Mount the base of the AMR100 Property Pass Reader to the prepared surface using the starter holes indicated in Figure 2.
2. These holes are not through holes and require drilling before mounting.
3. Choose the holes to be used and drill with a 5/32 (.156) inch bit. Use #6 screws only.

O-Ring

1. After the AMR100 Reader base is mounted, install the rubber o-ring by stretching around the reader base and placing it in the groove located along the edge. See Figure 2 for details.

Switch Settings

Set the DIP Switches labeled Switch 1 - Switch 4 (Figure 5) according to the following tables.

Switch #1 - Report Settings

Switch #2 - Serial Settings

Switch #3 - Hardware Settings

Switch #4 - Initialization Settings

* Denotes the default setting.

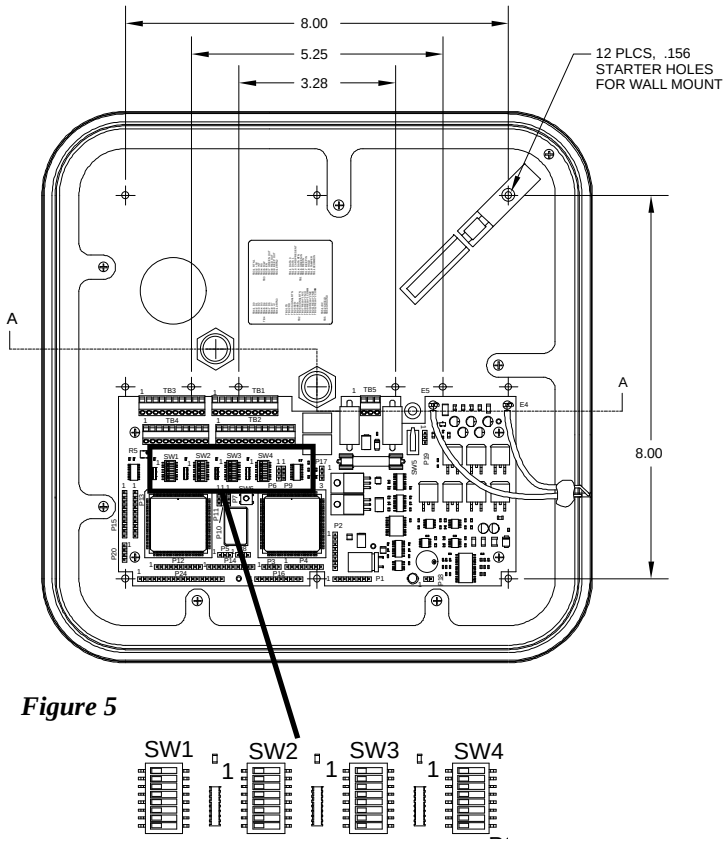


Figure 5

SWITCH #1 Report Settings	ON	OFF
1 Set Tamper Latch Mode	*Tag command is "Set Tamper"	Tag command is read from EEPROM
2 Re-report ID's	*Tag ID's are re-reported on each Poll	Reports only ID's that are different from previous
3 Indicator re-report	*Indicators activate for every ID	Indicators activate only for different from previous
4 Fast indicator duration's	Use 4X faster indicator durations	*1X durations
5 Acquisition test reports	Sends receiver and power level test reports - effects Simplex output and LCD	*
6 EPP Database		*
7 LCD Reports	LCD reports ID and sensor messages	*Host only control of LCD
8 Test LCD	Test	*LCD. For factory use only

Note: Data is always 8 bits, no parity, 1 stop bit

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7 LCD Reports	LCD reports ID and sensor messages	*Host only control of LCD
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Switch 3 Hardware settings	On	Off
1 MaxiTrak mode	* (Must remain in ON position)	
2 Access Control Exciter	* (Must remain in ON position)	
3 Free-Running Acq	* ID acquisition is free running; asynchronous with Host polls	
4 Staus LED's Disable	* (Must remain in ON position)	
5 Hardware Demodulator		* (Must remain in OFF position)
6 Low Gain		* (Must remain in OFF position)
7 8 Receivers (Not Used)		* (Must remain in OFF position)
8 2nd Access Reader (Not Used)		* (Must remain in OFF position)

Switch 4 Initialization Settings	On	Off
1 Switch Over-ride		*
2 Reset Factory Defaults		*
3 EEPROM Unlock		*
4 Flash Mode Bit 0		*
5 Flash Mode Bit 1		*
Not Used		*
Not Used		*
Not Used		*

Jumper Settings

There are several configuration options available according to how the jumpers are set on the board. These jumpers control serial input and output selections, beeper and tamper switch settings. Refer to the table on the following page for appropriate jumper settings.

Jumper Block	Jumper setting	Functional Description
P-5 Ground select	*1-2	Always should be left in this position
P-8 +5v select	*1-2	Always should be left in this position
	2-3	
P-6 Input communication protocol select	1-2	RS485 serial input selected
	*2-3	RS232 serial input selected
P-9 Output communication protocol select	1-2	RS485 serial output selected
	2-3	RS232 serial output selected
Output path selector	P7 #1- P10 #1	Serial output A selected
Input path selector	P7 #2- P10 #2	Serial input A selected
485 enable selector	P7 #3- P10 #3	485 enable A selected
Output path selector	*P11 #1- P10#1	Serial output B selected
Input path selector	*P11 #2- P10 #2	Serial input B selected
485 enable selector	*P11 #3- P10 #3	485 enable B selected
P-17 RS485 Termination	1-2	These should be jumped when the maxitrak is the last unit on the serial string from the 485 communication card
	2-3 (or no jumper)	This setting would apply to all other conditions.
P-18 Beeper enable	*1-2 jumped	Beeper enabled (audible tone will be heard with each card or asset read)
		Beeper disabled
P-19 Tamper switch select	1-2	Tamper output will be Normally Open
	2-3	Tamper output will be Normally Closed

Power Supply

1. The AMR100 Property Pass Reader can be operated over the full range of 12VDC to ± 1.2V. A linear supply is recommended.
2. After the Reader and power supply are wired together, apply power to the reader.

Cover Installation

1. Place the top cover onto the base of the AMR100 Reader.
2. Secure the cover to the base. Use the flathead screw provided. The location of the top cover screw is indicated on Figure 1.
2. Place the HID label over the screw.